hypospadius

DEF
- meatal op.
- Ventral aspect

A/E
- cogenital
  - Arrest
    - no incontenance
    - common distal
    - ant. urethra
  - not defect
    - epispedius
      - incontenance
      - common proximal
    - Genetic
- PDF
  - Enviromental

embryology
- urog. sinus
  - abdominal
    - bladder
  - pelvic
    - neck & post. urethra in M
- urethra
  - glanular
    - Ectoderm
  - rest
    - urethral fold

CP
- major complaint
  - abnormal direction
- other complaint
  - lean foreward or sit
  - major psycho.
- associations
  - abnormal shape of ext.
    - intersex
  - undescended T.
  - stenosed anus
  - cardiac
  - ectopic kidney

Examination
- VI-associated anomaly
- IV-glans
  - deep
    - furrowed
  - flat
  - conical
- III-prepuce
  - hood dorsal
    - ample
  - deficient
  - no
  - MIP
  - intact
- II-urethral plate
  - uderdeveloped
    - <6mm
    - N=6-8mm
- I-Meatus
  - site
    - normal
    - pinhole
  - size
    - MIP
    - megameatus
  - shape
    - semilunar N.
    - hypospadius
      - round
      - fish mouth
      - mega
  - mobility
    - under GA

treatment
- Steps
  - 1-Orthoplasty
    - excition of corpus spongiosum
      - from base
      - deglove skin
        - superficial
      - deep cordae
    - dysproportion
      - if lenght 6-8cm
        - dorsal plication
      - graft of T.albug. ventrally
        - ventral dermal graft
    - regain normal appearance
  - 2-urthroplasty
    - plate augmentation
      - defatting skin
        - graft
      - flab
        - prepuce or dartose
    - plate tubulization
      - if well developed
    - plate substitution
      - <3mm
    - meatal advancement glanuloplasty
      - mobilization
  - 3-glanuloplasty
    - in 2 layers as normal
  - 4-skin cover
    - by outer layer prepuce
    - inner layer as a flap
  - 5-urine diversion
    - cath. inserted into bladder
      - 1week
    - in complex
      - suprapubic cystocath.
        - 15d
      - stent in urethra
  - 6-dressings
    - absorbitive
      - 1st change 5d
        - ↓oedema
- complication
  - early
    - oedema
    - bleeding
    - heamatoma
    - disruption anast.
    - necrosis of cover.
  - late
    - Meatal stenosis
    - fistula
    - stricture
    - recurrence
    - M. retraction
    - disruption
- rational
  - ttt associated anomalies
  - allow shaft growth
  - improve appearance
  - improve micturation
- when to repair
  - 6-18 month
    - little move.
    - unaware
    - max. growth
- V-cordae
  - superficial
    - dartose fascia
    - ttt by skin degloving
  - deep
    - corpus spongiosum
    - exsision from base
  - corporal disproportion
    - dorsal placation
    - if short
      - ventral incition at T. albug.
- international class.
  - distal70%
    - gladular
    - coronal
    - subcoronal
    - distal shaft
  - mid penile10%
    - mid shaft
  - prox. penile20%
    - prox. shaft
    - penoscrotal
    - midscrotal
    - perineal